

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services



Certificate



CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 10710

DATE: July 14, 1988

PO# M6389

REPORT ON: WASTE DISCHARGE

SAMPLE

IDENTIFICATION: Submitted 07/05/88 and identified as shown below:

- 1) 6-1-3200-M6389
- 2) 6-3-3200-M6389
- 3) 6-7-3200-M6389
- 4) 6-9-3200-M6389
- 5) 6-14-3200-M6389
- 6) 6-16-3200-M6389
- 7) 6-21-3200-M6389
- 8) 6-23-3200-M6389
- 9) 6-28-3200-M6389
- 10) 6-30-3200-M6389



TESTS PERFORMED AND RESULTS:

parts per million (mg/L)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Zinc	0.14	0.097	0.072	0.16	0.085
Chromium	1.2	0.74	0.77	1.0	0.74
Copper	0.52	0.37	0.22	0.52	0.37
Nickel	0.80	0.46	0.44	0.68	0.49
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Zinc	0.11	0.068	0.088	0.078	0.089
Chromium	1.1	0.73	0.85	0.89	1.3
Copper	0.65	0.34	0.48	0.38	0.48
Nickel	0.83	0.53	0.48	0.65	0.86



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AKC-0015585

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Alaskan Copper Works

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LABORATORY NO. 10710

parts per million (mg/L)

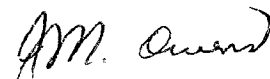
	Method
	<u>Blank</u>
Zinc	<0.002
Chromium	<0.005
Copper	<0.002
Nickel	<0.01

Key

< indicates "less than"

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JM0:emt



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AKC-0015586



Chemistry, Microbiology, and Technical Services

APPENDIX

Matrix Spike/Matrix Spike Duplicate Report

Inorganics/Metals Analyses

Sample	Analyte	parts per million (mg/L)		mg/L		QC Limits	
		Spike Added	Sample Result	MS Result	MSD Result	RPD	REC
1	Chromium	0.100	1.2	1.3	1.3	Comment A	
1	Zinc	0.100	0.14	0.22	0.21	Comment A	
1	Copper	0.100	0.52	0.57	0.54	Comment A	
1	Nickel	0.200	0.80	0.89	0.88	Comment A	

MS = Matrix Spike

MSD = Matrix Spike Duplicate

Rec = Recovery

RPD = Relative Percent Difference

Comment A. Samples are spiked prior to preparation and analysis at a level deemed to be generally appropriate to the average sample processed in the laboratory. In this case, the level of analyte already present in the sample was large enough to make an accurate determination of spike recovery impossible.



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